

EXECUTIVE SUMMARY

Prepared November 3, 2000

Mine Name: Cotton Thomas
Operator: Star Stone Quarries, Inc.
4040 South 300 West
Salt Lake City, Utah 84107

Telephone: (801) 262-4300
Contact Person: Lon Thomas, Owner
Life of Mine: 20+ years.

I.D. No: M/003/024
County: Box Elder
New/Existing: Existing SMO expanding to
LMO status
Mineral Ownership: Fee / BLM
Surface Ownership: Fee
Lease No.(s): N/A
Permit Term: 5 years

Legal Description: Portions of Sections 16, 17, 20, 21, and 28; Township 14 North, Range 17 West, SLBM, Box Elder County, Utah

Mineral(s) to be Mined: Quartzite flagstone and building stone

Mining Methods: Surface excavation

Acres to be Disturbed: 66.32 acres

Present Land Use: Grazing and Wildlife Habitat

Postmining Land Use: Grazing and Wildlife Habitat

Variances from Reclamation Standards (Rule R647) Granted:

Rule R647-4-107.5 - Topsoil Salvage (Areas are identified on Map #4 where soils are too thin to salvage. A borrow area and amended fines/overburden material will be used to assure adequate plant growth media for revegetation).

Rule R647-4-111.7 - Highwall reduction (a 12-foot high highwall will remain at the Autumn Gold quarry).

Rule R647-4-111.8 - Reclamation of Roads and Pads (Three road segments will remain to provide reasonable access to the property after mining operations cease. These road segments are: the road from the camp area to the Autumn Gold quarry, from the Autumn Gold quarry to the Buckskin quarry, and from the Buckskin quarry back to the camp). The camp area will also remain for post-mining use as a staging area for cattle.

Soils and Geology:

Soil Description: Three soil units were identified within areas that have been, or will be disturbed by this operation. The Parkay-Dateman Families association are classified as gravelly loam soils, and vary in thickness from rock outcrop to 7 feet deep. Up to 15% of the surface is covered with gravel. The Parkay-Broad Canyon Families association are gravelly loams to loam soils and vary in depth from outcrop to 6.5 feet deep. The Skylick-Hoodle association vary from a very gravelly loam to sandy clay loam to clay loam soils. Thickness varies from outcrop to about 4 feet. The limiting factor for revegetation for these soils is the steepness of the slopes. Lab analysis of the soil materials did not reveal any complications for use in final reclamation.

pH: 6.4

Special Handling Problems: Soils in some areas are too thin to salvage. These areas are identified on Map 4.

Geology Description: Cambrian (?) Quartzite of the Clarks Basin formation. The metamorphosed sediments are characterized by layers or partings of micas developed between thicker beds of fine quartzite.

Hydrology:

Ground Water Description: No ground water has been encountered during present mining operations. It is not expected that ground water will be encountered or impacted by this proposed operation because the pits are shallow and situated above the ground water table

Surface Water Description: There are a few springs and seasonal drainages located in the vicinity of the quarries and access roads. These are located at lower elevations than the quarries. The closest spring is 1200 feet north of the camp area. Mahogany Creek is 0.1 - 0.5 miles west of the quarries and access roads. Impacts to surface waters from this operation are not expected.

Water Monitoring Plan: None required at this time.

Ecology:

Vegetation Type(s); Dominant Species: Vegetation is dominated by low sagebrush, with scattered patches of snowberry, buckbrush and subalpine fir. Dominant species included low sagebrush, mountain big sagebrush, basin wildrye, snowberry, bluegrass, serviceberry, and sheep fescue.

Percent Surrounding Vegetative Cover: 63% vegetation cover as determined using a point intercept method. The revegetation standard for this site is 44.1% vegetation cover.

Wildlife Concerns: This area is considered summer range for deer and elk. Hawks make use of the stands of subalpine fir. There are no listed threatened or endangered species or their critical habitat found within the permit area.

Surface Facilities: No permanent buildings. A campsite with trailers is used for temporary employee housing. A network of roads connects the several small quarries associated with this project. Most of the property is fenced and located on private land. A 'No Trespassing' sign is posted on the main access road to restrict public access. The quarrying operations are located in a remote area several miles from the nearest residence or housing development.

Mining and Reclamation Plan Summary:

During Operations:

Salvageable soil over the proposed quarry and waste dump areas will be stripped from the surface

using a D8 dozer or excavator bucket and stockpiled prior to mining. A hydraulic excavator is used to extract the stone from the quarry. The stone is distributed to workers on the quarry dump and pad to process. Stone is split by hand to uniform size and stacked on pallets for shipping. Unusable material is placed on the waste dumps. Quarry cuts will be approximately ten feet deep. Equipment used includes a D-8 bulldozer, hydraulic excavator, two-yard front end loader, and two dump trucks. A 2,000 gallon fuel tank is located on site. It has a secondary containment structure with 110% capacity of the fuel tank.

After Operations:

All disturbed areas will be reclaimed excluding three road segments and the camp area which have been granted variances to remain for the postmining land use and property access. All highwalls (except at the Autumn Gold quarry) will be reduced to a slope of 45 degrees or less. Dump slopes will be graded to a slope of 2 - 2.5 h:1v. Pit floors will be left in a free-draining condition. Other areas and roads regraded to approximate original contours. Road segments not requiring regrading will be ripped to eliminate compaction. Quarry floors will be covered with 3 feet of subsoil material and dumps will be covered with 16 inches of fines (amended with compost to support vegetation). Two inches of topsoil will be spread over the regraded areas prior to seeding. All areas will be broadcast seeded with an approved seed mix designed to meet the intended post mining land use of grazing and wildlife habitat.

Surety:

Amount: \$105,200 (year 2006 dollars)

Form: Unknown at this time.

Renewable Term: 5 years.